

## Amendments to the Specification

Please replace paragraph [0036] with the following rewritten paragraph.

In certain embodiments, the organophosphorus hydrolase comprises a *Pseudomonas diminuta* ~~phosphotriesterase~~ phosphotriesterase, or a functional equivalent thereof. In some aspects, the organophosphorus hydrolase comprises a *Pseudomonas diminuta* ~~phosphotriesterase~~ phosphotriesterase. In other embodiments, a preferred organophosphorus hydrolase comprises a *Pseudomonas diminuta* ~~phosphotriesterase~~ phosphotriesterase functional equivalent. In certain aspects the *Pseudomonas diminuta* ~~phosphotriesterase~~ phosphotriesterase functional equivalent comprises a sequence analog, a structural analog, or a combination thereof. In particular facets, the *Pseudomonas diminuta* ~~phosphotriesterase~~ phosphotriesterase functional equivalent comprises a sequence analog. In some facets, the sequence analog comprises an amino acid substitution. In specific facets, the sequence analog comprises H55C, H57C, C59A, G60A, S61A, I106A, I106G, W131A, W131F, W131K, F132A, F132H, F132Y, L136Y, L140Y, H201C, H230C, H254A, H254R, H254S, H257A, H257L, H257Y, L271A, L271Y, L303A, F306A, F306E, F306H, F306K, F306Y, S308A, S308G, Y309A, M317A, M317H, M317K, M317R, H55C/H57C, H55C/H201C, H55C/H230C, H57C/H201C, H57C/H230C, A80V/S365P, I106A/F132A, I106A/S308A, I106G/F132G, I106G/S308G, F132Y/F306H, F132H/F306H, F132H/F306Y, F132Y/F306Y, F132A/S308A, F132G/S308G, L182S/V310A, H201C/H230C, H254R/H257L, H55C/H57C/H201C, H55C/H57C/H230C, H55C/H201C/H230C, I106A/F132A/H257Y, I106A/F132A/H257W, I106G/F132G/S308G, L130M/H257Y/I274N, H257Y/I274N/S365P, H55C/H57C/H201C/H230C, I106G/F132G/H257Y/S308G, A14T/A80V/L185R/H257Y/I274N, or a combination thereof.